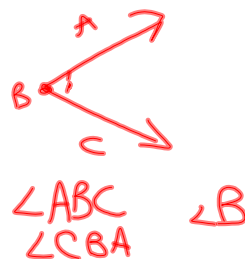


1.4 Measure and Classify Angles

Angle-figure formed by 2 rays with a common endpoint

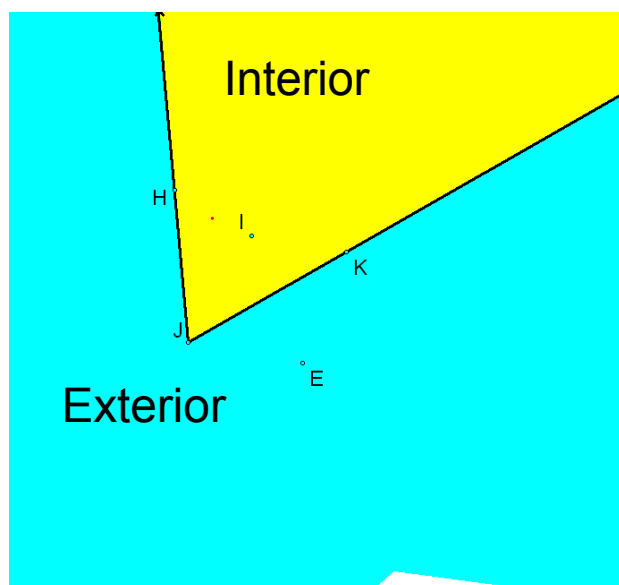


Rays are the sides of an angle

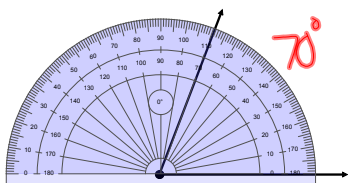


Common endpoint is the vertex

B



Postulate 3--Protractor Postulate--An angle can be positioned so that one ray ends with 0 and the other end can be matched one-to-one with the real numbers between 0 and 180.



Classifying Angles

Acute angle-measures between 0° and 90°

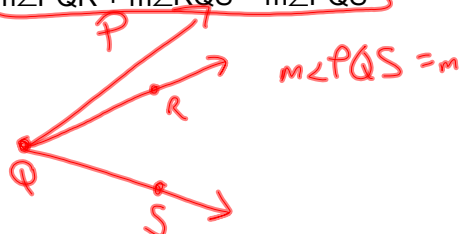
Right angle-measures 90°



Obtuse angle-measures between 90° and 180°

Straight angle-measures 180°

Postulate 4--The Angle Addition Postulate--If R is in the interior of $\angle PQS$, then
 $m\angle PQR + m\angle RQS = m\angle PQS$



Congruent angles-angles that have the same measurement



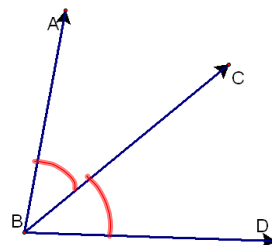
Angle Bisector-ray that divides an angle into 2 congruent angles

\overrightarrow{BC} bisects $\angle ABD$

$\angle ABC \cong \angle CBD$

$m\angle ABC = m\angle CBD$

$m\angle ABC = \frac{1}{2} m\angle ABD$

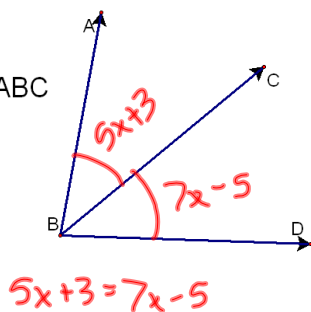


ex: Solve for x.

Find the $m\angle ABC$ \rightarrow BC bisects $\angle ABD$

$m\angle ABC = 5x + 3$

$m\angle CBD = 7x - 5$



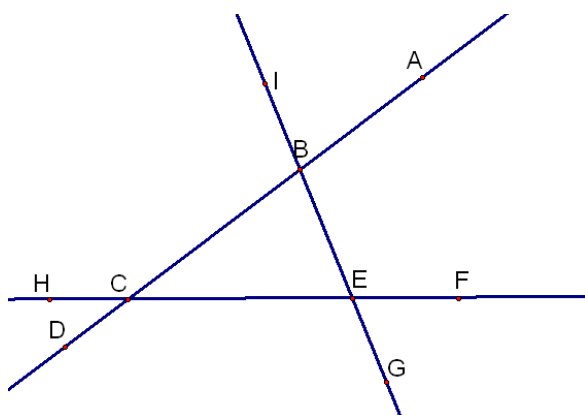
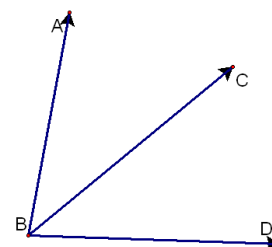
ex: Solve for x.

 \rightarrow BC bisects $\angle ABD$

$m\angle ABC = 10x + 12$

$m\angle ABD = 64$

$10x+12 = \frac{1}{2} 64$

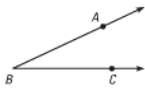


HW p28-30

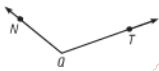
#s 3, 4, 6-10, 15-20, 23-26, 41, ~~42~~

NAMING ANGLES AND ANGLE PARTS In Exercises 3–5, write three names for the angle shown. Then name the vertex and sides of the angle.

3.



4.



6. **NAMING ANGLES** Name three different angles in the diagram at the right.

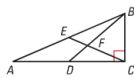


CLASSIFYING ANGLES Classify the angle with the given measure as *acute*, *obtuse*, *right*, or *straight*.

7. $m\angle W = 180^\circ$ 8. $m\angle X = 30^\circ$ 9. $m\angle Y = 90^\circ$ 10. $m\angle Z = 95^\circ$

NAMING AND CLASSIFYING Give another name for the angle in the diagram below. Tell whether the angle appears to be *acute*, *obtuse*, *right*, or *straight*.

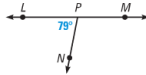
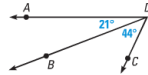
15. $\angle ACB$ 16. $\angle ABC$
17. $\angle BFD$ 18. $\angle AEC$
19. $\angle BDC$ 20. $\angle BEC$



Find the indicated angle measure.

23. $m\angle ADC = ?$

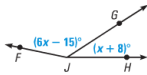
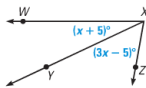
24. $m\angle NPM = ?$



ALGEBRA Use the given information to find the indicated angle measure.

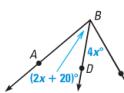
25. Given $m\angle WXZ = 80^\circ$, find $m\angle YXZ$.

26. Given $m\angle FJH = 168^\circ$, find $m\angle FJG$.



ALGEBRA In each diagram, \overrightarrow{BD} bisects $\angle ABC$. Find $m\angle ABC$.

41.



42.

